



Payment Cards and Economic Growth: The Impact of Electronic Payments

Moody's Analytics Study Findings

Payment cards aren't just convenient — they help stimulate growth for economies as well, according to a study conducted for Visa by Moody's Analytics, a leading independent provider of economic forecasting.

Summary

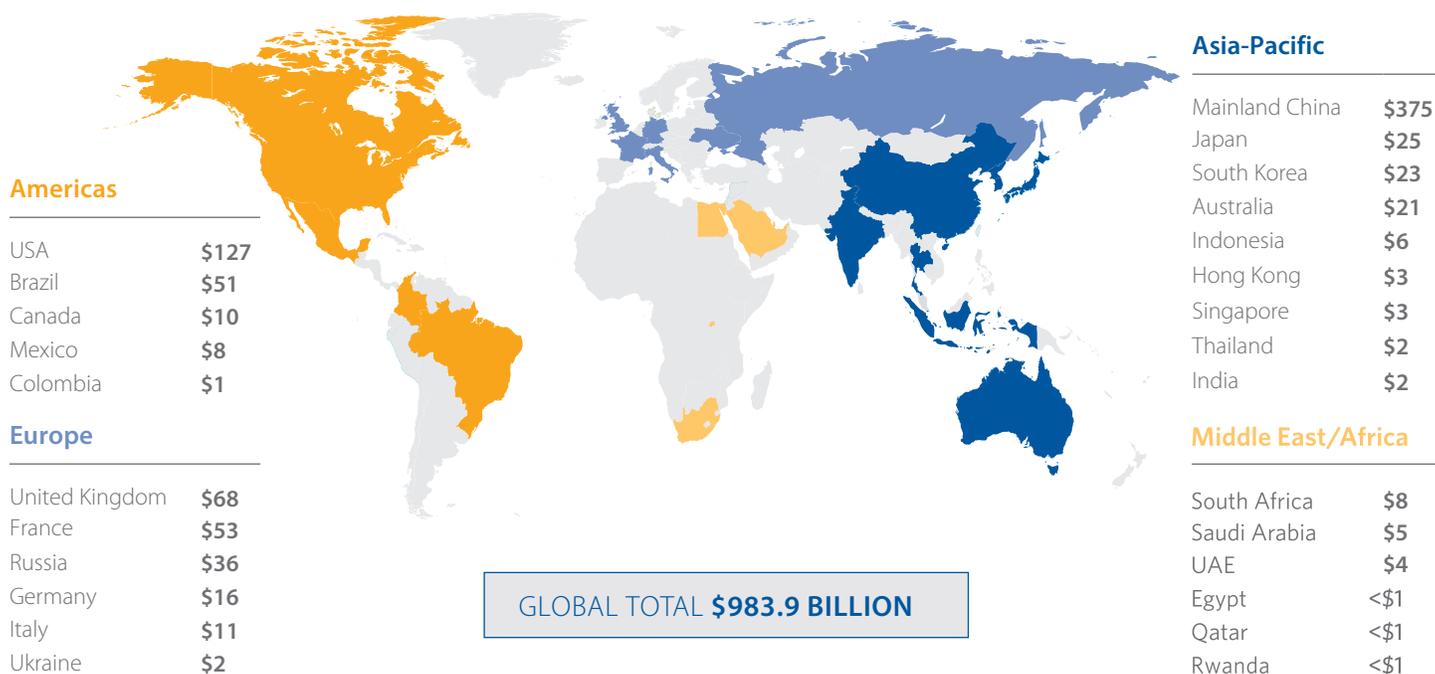
Moody's Analytics set out to test whether the long-term shift to credit and debit cards stimulates economic growth, and found that electronic card payments continue to have a meaningful impact on the world economy. These findings are notable as the global economy struggles to recover and as individual countries/regions consider whether to take steps to enable the wider use of cards. Key findings include:

- > The growth in the use of electronic payment products, such as credit and debit cards, added \$983 billion to the Gross Domestic Product (GDP) of the 56 countries/regions examined between 2008 and 2012.
- > Card penetration and usage provided an important boost to economies, helping to mitigate what would otherwise have been an even slower recovery from the global recession.

Other Highlights

- > **U.S. Economic Growth:** Card usage in the U.S. increased consumption by 0.3%, adding \$127 billion to the U.S. economy.
- > **Global Economic Growth:** In some countries/regions, card usage increased consumption significantly — at the top of that list: Mainland China by 4.89%, Chile by 1.28%, and Brazil by 1.15%.
- > **Impact in Emerging Markets:** Card usage added 0.8% to GDP across emerging markets, compared to 0.3% for developed markets. Emerging markets have seen the greatest increase in GDP due to a high growth rate of card penetration. For example, a dramatic increase in card usage in Mainland China — from 31% in 2008 to an estimated 56% in 2012 — corresponded to a 1.7% increase in GDP in that period.

The Contribution of Increased Card Usage to GDP *(in US 2008\$ bil, 2008-2012)*



The Value of Card Payments

The evolution to electronic payment from cash and checks has changed the behavior of and, in some cases, the relationship between consumers and merchants:

- > **Benefits to Consumers and Merchants:** Cards provide consumers with access to all available funds or lines of credit and merchants with the peace of mind of guaranteed payment.
- > **Security:** Cards provide consumers with recourse for fraudulent transactions.
- > **Transparency:** Cards help to reduce paper transactions, reducing the cost to central banks of providing notes and coins, and also increase tax revenues through the reduction of the gray economy.

Future Economic Benefits

Moody's Analytics found that a 1% increase in card usage across the 56 countries/regions in the study produces an annual increase of 0.056% in consumption. Given recent card penetration growth rates and the additive effects calculated on future GDP, Moody's Analytics estimates a meaningful 0.25% addition to consumption and 0.16% additional GDP.

Value of Electronic Payments

The study concluded that increased credit and debit card usage contributes to economic activity by reducing transaction costs and improving efficiency in the flow of goods and services.

Methodology

This study looked at the impact of increased card penetration on private consumption of 56 countries/regions over five years. Real private consumption was modeled as a function of real disposable income, real interest rates and spending using cards as a share of overall consumer expenditure (the last defined as 'card penetration'). To isolate the impact of increased card usage, the model used actual income and interest rates during the survey period, while fixing card penetration at the lowest level from 2008 to 2012. The model measured the difference between what actually happened (higher consumption) and what it predicted would have happened in the counterfactual where card penetration stayed at its lowest value between 2008 and 2012 (lower consumption).

Real Global GDP (2008 US\$ tril)

